

**CERTIFICATE OF COMPLIANCE  
FOR RADIOACTIVE MATERIAL PACKAGES**

<sup>1</sup> a	b	c	d	PAGE	PAGES
CERTIFICATE NUMBER 9281	REVISION NUMBER 6	DOCKET NUMBER 71-9281	PACKAGE IDENTIFICATION NUMBER USA/9281/AF-85	1 OF	3

**2 PREAMBLE**

- a This certificate is issued to certify that the package (packaging and contents) described in Item 5 below meets the applicable safety standards set forth in Title 10, Code of Federal Regulations, Part 71, "Packaging and Transportation of Radioactive Material."
- b This certificate does not relieve the consignor from compliance with any requirement of the regulations of the U.S. Department of Transportation or other applicable regulatory agencies, including the government of any country through or into which the package will be transported

**3 THIS CERTIFICATE IS ISSUED ON THE BASIS OF A SAFETY ANALYSIS REPORT OF THE PACKAGE DESIGN OR APPLICATION**

- |   |   |   |   |
|---|---|---|---|
| a | ISSUED TO ( <i>Name and Address</i> )<br>Babcock & Wilcox Nuclear Operations<br>Group, Inc.<br>P O. Box 785<br>Lynchburg, VA 24505-0785 | b | TITLE AND IDENTIFICATION OF REPORT OR APPLICATION<br>BWV Technologies, Inc., application dated<br>April 10, 2008. |
|---|---|---|---|

**4 CONDITIONS**

This certificate is conditional upon fulfilling the requirements of 10 CFR Part 71, as applicable, and the conditions specified below

**5****(a) Packaging**

- (1) Model No.: UBE-2
- (2) Description

A steel drum for the transport of uranium and uranium-beryllium waste materials of solid form. The waste may be contained within compacted 55-gallon drums. The packaging is a 70-gallon, open-head steel drum with a minimum 18-gauge shell and bottom head, and a minimum 18-gauge closure lid. The lid is closed by a 12-gauge bolted locking ring with drop forged lugs, one of which is threaded, having a 5/8 inch bolt and nut. The closure includes a gasket. The gross weight of the package, including the maximum weight of contents, is approximately 1000 pounds.

(3) Drawings

The packaging is constructed and assembled in accordance with Babcock & Wilcox Company Drawing, No. LP3024C, Rev. 1.

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(b) Contents

(1) Type and form of material

Uranium and uranium-beryllium waste of solid form. The waste may be contained within compacted 55-gallon drums

(2) Maximum quantity of material per package:

950 pounds, including compacted secondary containers. The uranium may be of any enrichment, and the beryllium may be present in any concentration. The maximum fissile mass is 100 grams U-235 per package, and the maximum average fissile mass density in the package is 0.5 gram U-235 per liter. Fission and activation products may be present, provided that the total quantity is less than  $1 \times 10^{-3}$  A<sub>2</sub> per package.

(c) Criticality Safety Index

<u>Maximum Fissile Mass Per Package (grams U-235 per package)</u>	<u>Criticality Safety Index</u>
2.0	0.5
5.0	1.0
6.0	1.2
10.0	2.0
20.0	4.0
25.0	5.0
50.0	10.0
100.0	20.0

6 In addition to the requirements of Subpart G of 10 CFR Part 71:

- (a) The package must be prepared for shipment and operated in accordance with the Operating Procedures in Section 7 of the application.
- (b) Each packaging must be acceptance tested in accordance with the Acceptance Tests in Section 8 of the application.

7 Transport by air of fissile material is not authorized.

8. The package authorized by this certificate is hereby approved for use under the general license provisions of 10 CFR 71.17.

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9 Revision No. 5 of this certificate may be used until November 30, 2009.

10 Expiration date: August 31, 2013.

REFERENCES

BWX Technologies, Inc., application dated April 10, 2008;  
Supplement dated: May 30, 2008.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Eric J. Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Date: November 12, 2008



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

**SAFETY EVALUATION REPORT**

**Docket No. 71-9281**  
**Model No. UBE-2 Package**  
**Certificate of Compliance No. 9281**  
**Revision No. 6**

**SUMMARY**

By letter dated May 30, 2008, BWX Technologies, Inc. (BWXT), Nuclear Operations Division, requested that Certificate of Compliance No. 9281 for the Model No. UBE-2 package be transferred to Babcock & Wilcox Nuclear Operations Group, Inc. BWXT, Nuclear Operations Division, did not request any changes to the design, operating procedures, acceptance tests, or maintenance program of the package. The Certificate has been revised.

**EVALUATION**

BWXT, Nuclear Operations Division, requested transfer of Certificate of Compliance No. 9281 for the Model No. UBE-2 package by letter dated May 30, 2008. BWXT, Nuclear Operations Division, requested that the transfer be effective on the day of the SNM-42 license transfer. No changes in the package design, operating procedures, acceptance tests and maintenance program or contents of the package were requested. The staff reviewed the documents referenced in the Certificate of Compliance, Revision No. 5, and determined that the required documentation was available and complete. The staff also reviewed the July 24, 2008, "Quality Assurance Plan for the Shipping Program," Revision 17, and determined that the name of the company on the Quality Assurance Program Approval was changed to Babcock & Wilcox Nuclear Operations Group, Inc. The following revisions to the certificate have been made:

Item 3(a) was changed from BWX Technologies, Inc., Nuclear Products Division, to Babcock & Wilcox Nuclear Operations Group, Inc. Babcock & Wilcox Nuclear Operations Group, Inc., has accepted responsibility for the completeness and accuracy of the statements and the representations of the previous certificate holder, BWX Technologies, Inc. Babcock & Wilcox Nuclear Operations Group, Inc.'s authorized activities include: design, procurement, fabrication, assembly, testing, modification, maintenance, repair, and use of the package. Babcock & Wilcox Nuclear Operations Group, Inc., will be responsible for maintenance of the certificate and Safety Analysis Report for the package design, in accordance with the requirements of 10 CFR 71.91(c).

Condition No. 9 was modified to authorize use of the previous revision of the certificate for a period of approximately one year.

**CONCLUSION**

The Certificate of Compliance has been revised to transfer the certificate from BWX Technologies, Inc., to Babcock & Wilcox Nuclear Operations Group, Inc. Based on the statements and representations in the application, the staff concludes that the change does not affect the ability of the package to meet the requirements of 10 CFR Part 71.

Issued with Certificate of Compliance No. 9281, Revision No. 6,  
on November 12, 2008.